

PCT COOPERATION TREA

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

NASH, David, Allan
Haseltine Lake & CO.
Imperial House
15-19 Kingsway
London WC2B 6UD
ROYAUME-UNIDate of mailing (day/month/year)
26 January 2001 (26.01.01)Applicant's or agent's file reference
WO 95.0115

IMPORTANT NOTIFICATION

International application No.
PCT/EP00/05513International filing date (day/month/year)
13 June 2000 (13.06.00)

1. The following indications appeared on record concerning:

☐ the applicant ☐ the inventor ☒ the agent ☐ the common representative

Name and Address

MENES, Catherine
Etudes et Productions Schlumberger
Division Dowell
26, rue de la Cavée
BP 202
F-92142 Clamart Cedex
France

State of Nationality

State of Residence

Telephone No.

33 1 45 37 22 53

Facsimile No.

33 1 45 37 20 10

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☒ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address

NASH, David, Allan
Haseltine Lake & CO.
Imperial House
15-19 Kingsway
London WC2B 6UD
United Kingdom

State of Nationality

State of Residence

Telephone No.

44 117 910 3200

Facsimile No.

44 117 910 3201

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office ☒ the designated Offices concerned
☐ the International Searching Authority ☐ the elected Offices concerned
☐ the International Preliminary Examining Authority ☐ other:The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Athina Nickitas-Etienne

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38

INTERNET COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 26 February 2001 (26.02.01)	
International application No. PCT/EP00/05513	Applicant's or agent's file reference WO 95.0115
International filing date (day/month/year) 13 June 2000 (13.06.00)	Priority date (day/month/year) 18 June 1999 (18.06.99)
Applicant BRAND, Fabien, J. et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

15 January 2001 (15.01.01)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer F. Baechler Telephone No.: (41-22) 338.83.38
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PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference WO 95.0115	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 00/05513	International filing date (day/month/year) 13/06/2000	(Earliest) Priority Date (day/month/year) 18/06/1999
Applicant SOFITECH N.V.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.
☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

Internatⁿ Application No
PCT/EP 00/05513

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C09K7/02 E21B43/25 E21B33/138

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C09K E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, API Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 979 304 A (FISCHER PAUL W ET AL) 7 September 1976 (1976-09-07) example 8	1-6,9
A	US 3 302 719 A (FISCHER PAUL W ET AL) 7 February 1967 (1967-02-07) claims 1-28; example 1	1-6,9
A	GB 2 120 302 A (DYER JOHN JAMES;VIALLS OTH0 JEWELL) 30 November 1983 (1983-11-30) cited in the application the whole document	1-6,9
A	US 3 878 141 A (JACKSON JACK M ET AL) 15 April 1975 (1975-04-15) the whole document	1-6,9
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

22 November 2000

Date of mailing of the international search report

30/11/2000

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

olde Scheper, B

INTERNATIONAL SEARCH REPORT

Internati	Application No
PCT/EP 00/05513	

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 785 438 A (JACKSON J ET AL) 15 January 1974 (1974-01-15) cited in the application the whole document <div style="text-align: center;">----</div>	1-6,9
A	US 5 646 093 A (DINO DAVID JOSEPH) 8 July 1997 (1997-07-08) claims 1-9 <div style="text-align: center;">----</div>	1-6,9
A	US 5 669 456 A (AUDIBERT ANNIE ET AL) 23 September 1997 (1997-09-23) claims 1-16 <div style="text-align: center;">----</div>	1-6,9
E	EP 1 041 242 A (M I LLC) 4 October 2000 (2000-10-04) cited in the application the whole document <div style="text-align: center;">-----</div>	1,7-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internati Application No
PCT/EP 00/05513

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3979304 A	07-09-1976	US 3882029 A CA 990059 A US 3979305 A US 3989632 A	06-05-1975 01-06-1976 07-09-1976 02-11-1976
US 3302719 A	07-02-1967	NONE	
GB 2120302 A	30-11-1983	NONE	
US 3878141 A	15-04-1975	US 3785438 A	15-01-1974
US 3785438 A	15-01-1974	US 3878141 A	15-04-1975
US 5646093 A	08-07-1997	NONE	
US 5669456 A	23-09-1997	FR 2716928 A US 6040276 A CA 2143926 A DE 69516921 D EP 0670359 A NO 950831 A	08-09-1995 21-03-2000 04-09-1995 21-06-2000 06-09-1995 04-09-1995
EP 1041242 A	04-10-2000	GB 2348447 A AU 2078100 A NO 20001476 A	04-10-2000 28-09-2000 28-09-2000

PATENT COOPERATION TREATY

PCT

REC'D 09 MAR 2001

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

14

Applicant's or agent's file reference WO 95.0115	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP00/05513	International filing date (day/month/year) 13/06/2000	Priority date (day/month/year) 18/06/1999
International Patent Classification (IPC) or national classification and IPC C09K7/02		
Applicant SOFITECH N.V. [ET AL.]		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☒ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 15/01/2001	Date of completion of this report 06.03.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer olde Scheper, B Telephone No. +49 89 2399 2141



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP00/05513

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).):*

Description, pages:

1-14 as originally filed

Claims, No.:

1-9 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/05513

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-9
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-9
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-9
	No:	Claims	

2. Citations and explanations
see separate sheet

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/05513

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: US-A-3979304
D2: US-A-3302719
D3: GB-A-2120302
D4: US-A-3878141
D5: US-A- 3785438
D6: US-A-5646093
D7: US-A-5669456

1. D1 discloses (Example 8) a gelled water based wellbore fluid comprising a hydrophobic modified bridging agent. D1 does not disclose an hydrophobic fluid loss additive.
2. D2-D5 disclose hydrophobic, hydrophobically modified or oil wettable bridging materials. These documents do not disclose hydrophobic (modified) fluid loss additives.
3. D6 discloses hydrophobic modified polygalactomannans which are used in drilling fluids. D6 does not disclose hydrophobic, or hydrophobically modified bridging agents.
4. D7 discloses hydrophobic modified cellulose derivates which are used in drilling fluids. D7 does not disclose hydrophobic, or hydrophobically modified bridging agents.
5. The present application meets therefore the requirements of Art. 33(2) PCT since the subject-matter of the claims on file is not disclosed in the prior art.
6. An inventive step can be recognised since examples 9-11 show that a return permeability can only be obtained if a combination of hydrophobically modified

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/05513

starch and hydrophobically modified bridging agents is used (when compared to comparative examples 7 and 8).

This effect cannot be derived from the prior art and the subject-matter of present claims 1-9 meets the requirements of Art. 33(3) PCT.

7. The present application satisfies the criterion set forth in Article 33 (4) PCT because the subject matter of Claims 1-9 is industrially applicable.

Re Item VI

Certain documents cited

Certain published documents (Rule 70.10)

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
EP-A-1041242	04.10.2000	17.03.2000	27.03.1999

This document discloses expresses verbis the bridging agents cited in present claims 7 and 8. No check could be made whether the priority of this document was validly claimed.

Re Item VIII

Certain observations on the international application

1. In the claims the same component is indicated as "bridging material", "bridging agent" or "bridging solid". A consistent indication is essential in order to avoid confusion (Art. 6 PCT).
2. The feature "or others" used in claim 3 is undefined (Art. 6 PCT).
3. The feature "e.g. poly-hydroxypropylmethacrylate", used in claim 2, is a preferred embodiment and therefore subject of an additional dependent claim (Rule 13.4 EPC; PCT Examination Guidelines III-3.4).

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 December 2000 (28.12.2000)

PCT

(10) International Publication Number
WO 00/78890 A1

(51) International Patent Classification⁷: C09K 7/02,
E21B 43/25, 33/138

BRADBURY, Andrew [GB/GB]; 1 Blackhall forest, Ban-
chory, Kincardineshire AB31 6PS (GB).

(21) International Application Number: PCT/EP00/05513

(74) Agent: MENES, Catherine; Etudes et Productions
Schlumberger, Division Dowell, 26, rue de la Cavée, BP
202, F-92142 Clamart Cedex (FR).

(22) International Filing Date: 13 June 2000 (13.06.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9914351.3 18 June 1999 (18.06.1999) GB

(81) Designated States (*national*): AL, AM, AT, AU, AZ, BA,
BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES,
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG,
MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
YU, ZW.

(71) Applicant (*for all designated States except CA, FR, US*):
SOFITECH N.V. [BE/BE]; Rue de Stalle 142, B-1180
Brussels (BE).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for CA only*): SCHLUMBERGER CANADA
LIMITED [CA/CA]; 24th Floor, Monenco Place, 801 6th
Avenue, S.W., Calgary, Alberta T2P 3W2 (CA).

Published:

- With international search report.
- Before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments.

(71) Applicant (*for FR only*): COMPAGNIE DES SER-
VICES DOWELL SCHLUMBERGER [FR/FR]; 50,
avenue Jean-Jaurès, F-92541 Montrouge (FR).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): BRAND, Fabien,
J. [FR/FR]; 35, avenue Jean Moulin, F-75014 Paris (FR).

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: WATER BASED WELLBORE FLUIDS

(57) Abstract: The invention relates to water based wellbore fluids used during a hydrocarbon recovery process, such as drilling, fracturing, gravel packing and wellbore workover. According to the present invention, said wellbore fluid comprises a fluid loss additive and a bridging material that are hydrophobic in nature, hydrophobically modified or oil wettable. The wellbore fluid generates an active filter cake that once formed, is impermeable to an aqueous phase, thus reducing fluid loss and ensuring reduced damage to the formation, yet simultaneously is permeable to the back flow of hydrocarbons during a hydrocarbon recovery process.

WO 00/78890 A1



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Your ref: HL77466/002/DAN/CJP/eg
Application No: GB 9914351.3
Applicant: Sofitech N.V.

Examiner: Nicholas Mole
Tel: 01633 813797
Date of report: 8 January 2003

Latest date for reply: 8 July 2003

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Patents Act 1977 Examination Report under Section 18(3)

Inventive step

1. The invention as defined in claims 1-6, 9 is obvious in view of what has already been disclosed in the following documents:

GB 2120302 A	(DYER) see whole document; relevant to claims 1-6, 9
US 5720347	(AUDIBERT) see esp. col 1 line 63 to col. 2 line 3; relevant to claims 1-6, 9
US 5669456	(AUDIBERT) see esp. col. 1 lines 56-67; relevant to claims 1-2, 4-6, 9
US 4428843	(COWAN) see esp. col. 2 lines 24-32; relevant to claims 1-3, 4, 9
US 4356096	(COWAN) see esp. col. 3 lines 31-58; relevant to claims 1-3, 4, 9
SU 80-885626	(DZHIENBAEV) see WPI abstract; relevant to claims 1-2, 4-6, 9

US '347, US '456 and SU '626 disclose the use of hydrophobically-modified fluid loss additives while the remaining documents disclose hydrophobically-modified bridging materials. As acknowledged by the application it is known to have a water-based wellbore fluid having both fluid loss additive and a bridging material. Therefore there would appear to be no inventive step in hydrophobically-modifying both the fluid loss additive and the bridging material using the teaching of the above documents and hence claims 1-6 and 9 cannot be deemed inventive.

Clarity/support

2. Claim 3 is unclear through the use of the phrase 'said starch is a polymerised starch or a starch modified by.....' which leaves it uncertain whether the 'said starch' refers to the 'hydrophobically modified starch' of claim 2.
3. Claim 4 is unsupported by the description through the use of the phrase 'hydrophobic' and 'organic material'.
4. Claim 4 is inconsistent with claim 1 through the use of the phrase 'bridging solid' rather than 'bridging material'.
5. Claim 7 is unclear through the use of the phrase 'preferably over 10°C' where this conflicts with 'over 80°C'.
6. Claim 7 (and hence claim 8) is inconsistent with claim 1 through the use of the



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Your ref: HL77466/002/DAN/CJP/eg
Application No: GB 9914351.3

Date of Report: 8 January 2003
Page 2/2

[Examination Report contd.]

phrase 'bridging agent' rather than 'bridging material'.

7. The description has been rendered obscure at page 6 where the given equation and its key do not appear to match.

Non-metric units

8. The equivalent metric values should be given alongside the non-metric values mentioned on pages 5, 7, 8, 9, 10, 11, 12, 13, 14 and 15 of your specification.